

Red Hat OpenShift Developer II: Building and Deploying Cloud-native Applications

Course Duration: 40 Hours

Course Code: DO289.

1. Course Overview

The **Red Hat OpenShift Developer II: Building and Deploying Cloud-native Applications** course is designed to help developers build, deploy, and manage cloud-native applications on Red Hat OpenShift. It covers advanced application development concepts, including microservices, container orchestration, CI/CD pipelines, and DevOps practices. Participants will learn how to leverage OpenShift features to create resilient, scalable, and secure applications optimized for production environments.

2. What You'll Learn?

By the end of this course, you will be able to:

- Build, deploy, and manage **cloud-native applications** on OpenShift.
- Implement **microservices architecture** using containers.
- Configure and use **OpenShift pipelines** for CI/CD automation.
- Secure applications with **policies, secrets, and configurations**.
- Integrate applications with external services and APIs.
- Monitor, troubleshoot, and scale applications on OpenShift.
- Apply best practices for **cloud-native DevOps** development.

3. Target Audience

This course is intended for:

- **Application developers** building and deploying cloud-native applications.
- **DevOps engineers** managing CI/CD pipelines and automation.
- **Software architects** designing microservices and container-based applications.
- **Cloud-native developers** who want to optimize applications for Kubernetes and OpenShift environments.

4. Pre-Requisites

Participants should have:

- Completed **Red Hat OpenShift Developer I: Introduction to OpenShift Applications (DO288 equivalent)**.
- Basic knowledge of **Kubernetes** and **OpenShift architecture**.
- Experience with **containerized application development**.
- Familiarity with **DevOps tools** (Git, CI/CD, APIs) is recommended.

5. Course Content

Module 1: Advanced OpenShift Application Development

- Review of OpenShift fundamentals
- Developing microservices for cloud-native environments

Module 2: Building and Deploying Applications

- Containerizing applications for OpenShift
- Deploying and scaling applications with OpenShift

Module 3: CI/CD with OpenShift Pipelines

- Implementing automated builds and deployments

- Configuring OpenShift Pipelines for DevOps

Module 4: Application Security and Configurations

- Managing secrets and environment variables
- Securing applications with OpenShift policies

Module 5: Integration with Services and APIs

- Connecting applications with external services
- Service discovery and API management in OpenShift

Module 6: Monitoring, Logging, and Troubleshooting

- Monitoring application health and performance
- Logging strategies for cloud-native applications
- Debugging and troubleshooting in OpenShift

Module 7: Best Practices for Cloud-native Development

- Designing for scalability and reliability
- Applying DevOps practices with OpenShift
- Real-world use cases and demonstrations